FREQUENCY COMPENSATION OF WIDE-BAND RESISTIVE GAIN AMPLIFIER

ABSTRACT OF THE DISCLOSURE

A technique for minimizing the effect of parasitic capacitance in a resistive gain amplifier. Instead of the resistors being formed directly over the substrate, or over an oxide of the substrate, a semiconductor element (e.g., an n-well) is used between the resistor and the substrate. For resistors in the input circuit, this semiconductor element is connected to the voltage input rather than ground. For the resistors in the feedback loop circuit, the semiconductor element is connected to the voltage output of the operational amplifier. The insertion of this semiconductor element provides the ability to progammably connect the parasitic capacitance to somewhere other than ground. By connecting the parasitic capacitance to the voltage input or voltage output, the ground connection is eliminated, eliminating the pole introduced by the parasitic capacitance.

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